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REMARKS

Applicants respectfully request reconsideration of the application in view of the following remarks.

Claim Rejection – 35 USC 102/103

Claims 1-3 were rejected under 35 USC 102/103 as being unpatentable over Buechecker et al. (WO 02/062873). Applicants respectfully traverse the rejection.

The rejection states that Buechecker discloses an aromatic photoactive side-chain diamine and polyamic acid and polyamide in the abstract and the Example 1 of the reference. Applicants respectfully disagree.

The reference abstract does not disclose a diamine compound. The reference's abstract, lines 1-4, states:

A photoactive side-chain polymer from the class of polyimides, polyamide acids and esters thereof, comprising as a side-chain a dendritic block incorporating photoactive groups at its surface.

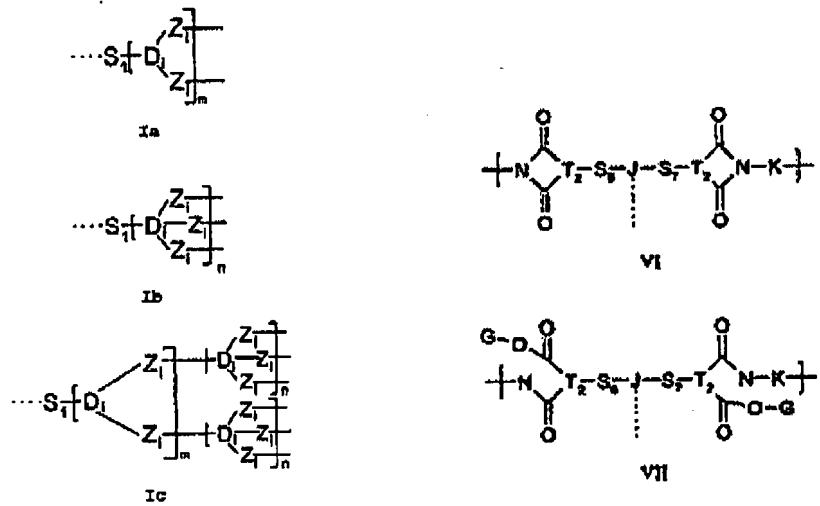
Polyimides are not diamines. Polyamide acids are not diamines (polyamide acids are also known in the art as polyamic acids and the reference uses these two nomenclatures interchangeably; compare reference abstract and reference page 1, line 5-6 which states "The present invention relates to a photoactive polymer based on polyimides, polyamic acids and esters thereof . . .").

Further, although Example 1 of the reference states that various diamines may be synthesized, none of the stated compounds disclose the compounds of claims 1-2. The reference Example 1 names sixteen compounds, wherein fourteen compounds are various forms of 3,5-diaminobenzoates, one compound is a 2,5-diaminophenoxy compound and the one compound is 2,2'-bis({[3,5-bis{[3,5-bis(4-{4-[{(1E)-3-methoxy-3-oxo-1-propenyl]} phenoxy]butoxy}benzyl]oxy}benzoyl]oxy}hexyloxy)-1,1'-biphenyl-4,4'-diamine (page 49, line 25 – page 51, line 23). None of the sixteen reference compounds disclose the compounds as claimed in claims 1-2 of the present application. Therefore, the reference does not anticipate claims 1-3 of the present application. A favorable reconsideration is requested.

The reference also fails to teach or suggest claims 1-3, for at least the following reasons. The rejection states that the reference page 37, line 20 teaches structures comprising main diamine chain analogous to ones in claim 1. Applicants respectfully disagree.

Page 37, line 20 of the reference teaches that element K is an aliphatic, alicyclic or aromaticdivalent radical (page 37, line 19; see also page 29, lines 23-24). Further, the reference teaches that K is derivable from aliphatic, alicyclic or aromatic diamines by formal removal of the amino groups (see page 37, lines 19-21). Accordingly, K does not have any amino groups as part of the compound structure. Therefore K is not a diamine.

The reference further teaches that K is a part of formulae VI and VII (page 27). Wherein the broken line (at J) symbolizes linkage to S₁ (pages 28, line 9) of the dendritic blocks shown below. The reference also teaches that the broken lines shown in dendritic blocks "symbolizes the linkage to polyimide main chain," and not to a diamine chain as stated in the rejection (page 6, lines 16-17):



Thus, the reference teaches that J of formulae VI or VII is linked to S_1 of dendritic blocks Ia, Ib, or Ic, where K is an aliphatic, alicyclic or aromaticdivalent radical. Such compounds are not analogous to diamine compounds of claim 1. Therefore, the reference does not teach or suggest diamine compounds of claim 1.

For at least the above reasons, claims 1-2 are patentable over Buecker et al. Claim 3 is also patentable for at least the same reasons as claim 1, from which it depends. Applicants respectfully request a favorable reconsideration of the claims.

Claim Rejections - 35 USC 103

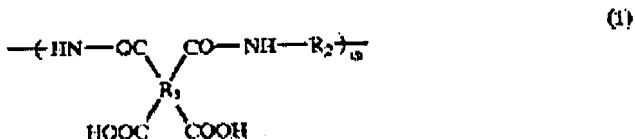
Claims 1-10 were rejected under 35 USC 102/103 as being unpatentable over Tanioka et al. (US Patent 6746730 and WO 01/00732). Applicants respectfully traverse this rejection.

The rejection does not substantively discuss how Tanioka et al. discloses claims 1-10 of the present application. Applicants respectfully disagree that the reference discloses claims 1-10. Applicants respectfully request a substantive discussion as how the reference discloses each of claims 1-10 so that Applicants may substantively address the rejection. In the alternative, Applicants request a withdrawal of rejection under 35 USC 102 for claims 1-10.

The rejection states that Tanioka teaches a varnish composition comprising fully aromatic or alicyclic diamine and alicyclic or aromatic tetracarboxylic acid dianhydride, and further that Tanioka's diamine and polyimide are analogous to one in the present application. Applicants respectfully disagree.

The disclosure specifically cited in the rejection teaches a varnish mixture, which comprises a solvent and a polymer component. The mixture includes a polyamic acid (B), a polyamic acid (A), and a soluble polyimide.

The first chemical discussed by the reference is a polymer. More specifically, a polyamic acid (B), represented by reference formula (1) shown below:

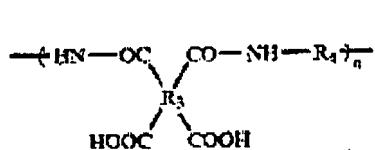


The reference teaches that R_1 of the above formula (1) is a tetravalent organic radical. The reference also teaches that R_2 of the above formula (1) is a divalent organic radical derived from a diamine. The reference also teaches that both R_1 and R_2 are radicals "having no side chain, a radical having an alkyl side chain of less than 3 carbon atoms or a radical comprising a mixture of these" (column 3, lines 30-33).

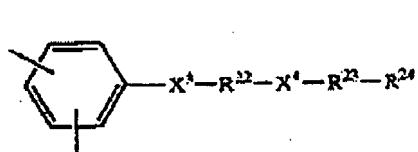
In contrast to the above reference, claim 1 of the present application is a monomer. Further, claim 1 is a diamine compound. Further, the part of the compounds in claim 1 that could be considered to be a side-chain has more than 3 carbon atoms. Accordingly, the above

formula (1) does not teach a chemical structure analogous to claim 1. For at least the same reasons, the above formula (1) also does not teach a chemical structure analogous to claim 2.

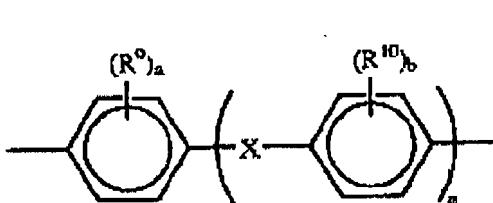
The structure cited in the rejection for polymeric acid (A) is:



wherein R_3 is a tetravalent organic radical derived from tetracarboxylic acids and R_4 is a divalent organic radical, wherein the divalent organic radical R_4 is formula (7) (column 3, lines 35-45):

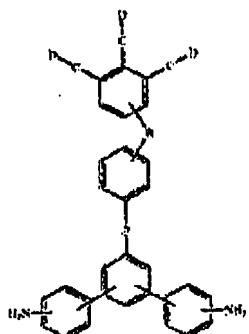


Wherein said divalent organic radical is at least one radical selected from the group consisting of the radicals represented by formula (4) (column 5, line 7 - column 6, line 10):

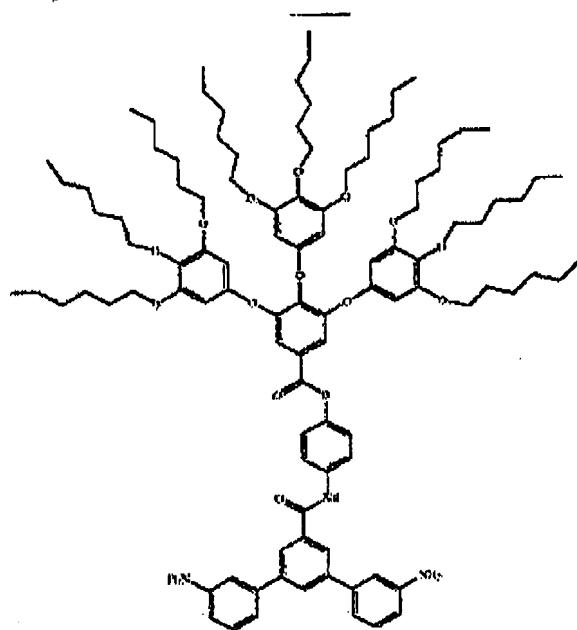


The reference teaches that R^4 is derived from a diamine. Being derived from a diamine is different from a teaching that it is a diamine. The reference fails to teach or suggest that any part of the above structures is a diamine.

Further, the reference teaches that X^3 and X^4 each represent a single bond, O, COO, OCO, NH, CONH or $(CH_2)_n$; and R^{22} and R^{23} each independently represent a single bond, a group of 1-3 rings having an aromatic ring and/or an alicyclic ring (where R^{22} and/or R^{23} have 2 or 3 rings, these rings may be bonded with a single bond, O, COO, OCO, NH, CONH or $((CH_2)_n)$, or a steroid group. The reference fails to teach or suggest the compounds of claims 1-2, at least for example, the three substituents D that are independently a C_{1-20} linear branched or cyclic alkyl group as required in claim 1:



The cited reference also fails to teach or suggest compounds as required in claim 2, at least for example:



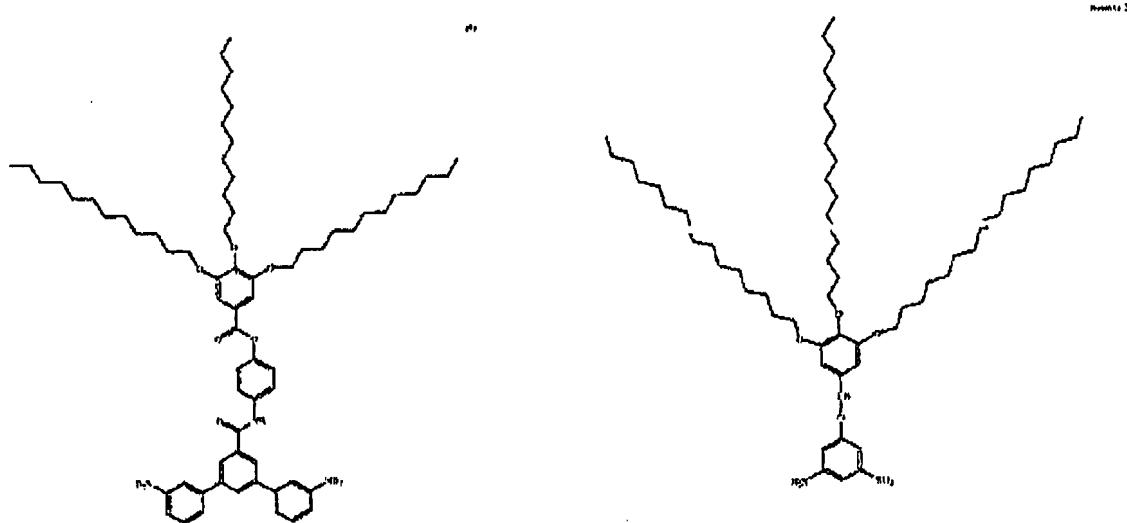
Accordingly, the cited reference structures are not similar to the claimed structures. Thus, claims 1-2 are patentable over the reference. Claims 3-10 are also patentable over the reference, for at least the same reasons as claim 1 from which they depend. A favorable reconsideration of claims 1-10 is requested.

Double Patenting

Claims 1-10 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 2-10 of copending Application No. 11/221156. Applicants respectfully traverse this rejection.

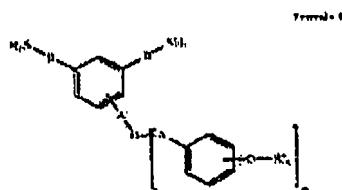
In particular, the rejection stated that claim 2 of the present application and claim 2 of Application No. 11/221156 teach diamines with identical structures. Applicants respectfully disagree.

Below are examples of compounds from claim 2 of the present application (left) and claim 2 of Application No. 11/221156 (right). As it can be clearly be seen, the following two structures are not identical:

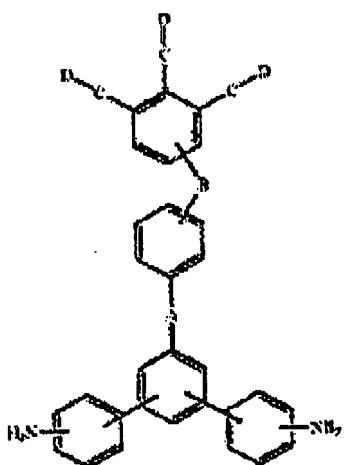


The rejection also stated that claim 4 of the present application and claim 4 of Application No. 11/221156 teach diamines with identical structures. Applicants respectfully disagree. Additionally, the rejection further stated that claim 1 of the present application and claim 4 of Application No. 11/221156 disclose the same diamine compounds. Applicants respectfully disagree.

Claim 4 of Application No. 11/221156 requires a polyamic acid made from a diamine compound of claim 1 of Application No. 11/221156. The diamine compound of claim 1 has the following structure:



Application No. 11/221156 requires that G is a single bond when m is 1. A and A' are each independently a single bond, or selected from a group consisting of -O-, -COO-, -OCO-, and -NHCO-. In contrast, claim 4 of the present application requires a diamine compound according to claim 1 of the present application:



Because Application No. 11/221156 requires that G is a single bond when m is 1, the compound of claim 1 of Application No. 11/221156 is not identical to the diamine compound according to claim 1 of the present application. Further, claim 4 of Application No. 11/221156 requires a polyamic acid made from the compound of claim 1 of Application No. 11/221156. Accordingly, claim 4 teaches a polyamic acid, not a diamine. Therefore, claim 1 of the present application and claim 4 of Application No. 11/221156 do not disclose the same diamine compound. Additionally, claim 4 of the present application requires a diamine having a structure of claim 1 of the present application. Therefore, claim 4 of the present application and claim 4 of Application No. 11/221156 do not teach diamines with identical structures.

Accordingly, the base diamine structure in Application No. 11/221156 does not overlap the scope of the present application. Therefore, claims 1-10 of the present application and claims 2-10 of copending Application No. 11/221156 are patentably distinct from each other. Applicants respectfully request a favorable reconsideration.

In view of the above, it is submitted that the application is in condition for allowance. Reconsideration is requested. Allowance of all pending claims at an early date is solicited. Any questions regarding this communication can be directed to the undersigned attorney, Curtis B. Hamre, Reg. No. 29,165 at (612) 455-3802.

Respectfully submitted,

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